Amendments to the Claims:

The listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1–20 (canceled).

21. (Previously Presented) A method for forming conducting structures separated by dielectric material over a substrate, comprising:

providing a substrate and a wiring layer above the substrate;

forming a conductive protective layer comprising titanium nitride on the wiring layer;

forming a cap layer above the conductive protective layer;

forming a first mask above the cap layer so that the first mask exposes selected portions of the cap layer, the first mask comprising a patterned photoresist layer;

etching at least the cap layer using the first mask and etching the wiring layer using the first mask to form wiring lines separated by first gaps, remaining portions of the cap layer disposed above the wiring lines, at least portions of sides of the wiring lines exposed by the etching the wiring layer; and

depositing a dielectric material within the first gaps and on the remaining portions of the cap layer disposed above the wiring lines at least when the depositing begins, an initial stage of the depositing forming initial layers of the dielectric material over the substrate, covering the exposed side portions of the wiring lines and on at least portions of the remaining portions of the cap layer, second gaps being defined by the initial layers between adjacent side portions of pairs of the wiring lines, the depositing continuing by performing high density plasma chemical vapor deposition at a sputtering rate sufficient to fill the second gaps between the wiring lines.

22. (Previously Presented) The method of claim 21, wherein the cap layer comprises a material selected from the group consisting of a silicon nitride material and an oxynitride material.

23. (Previously Presented) The method of claim 21, wherein one remaining portion of the cap layer above at least one wiring line has a rectangular shape in cross section.

24. (Previously Presented) The method of claim 21, wherein prior to the depositing one remaining portion of the cap layer above at least one wiring line has a trapezoidal shape in cross section.

25. (Previously Presented) The method of claim 24, wherein prior to the depositing the trapezoidal shape includes top and bottom surfaces parallel to one another and side surfaces that extend inwardly from the bottom surface to the top surface.

26. (Previously Presented) The method of claim 21, wherein prior to the depositing one remaining portion of the cap layer above at least one wiring line has a triangular shape in cross section.

27. (Previously Presented) The method of claim 21, wherein prior to the depositing one remaining portion of the cap layer above at least one wiring line has, in cross section, a rectangular shape having its upper corners etched away.

28. (Previously Presented) The method of claim 21, wherein the remaining portions of the cap layer are partially etched and redeposited into the second gaps during the high density plasma chemical vapor deposition.

29. (Previously Presented) The method of claim 21, wherein the remaining portions of the cap layer are partially etched during the high density plasma chemical vapor.

30. (Canceled)

31. (Previously Presented) The method of claim 21, further comprising forming a surface layer between the substrate and the wiring layer, the surface layer being a barrier between the substrate and wiring layer.

32. (Previously Presented) The method of claim 21, wherein the cap layer comprises an oxide.

33-34. (Canceled)

35. (Currently Amended) A method for forming conducting structures separated by dielectric material over a substrate:

providing a substrate and a wiring layer above the substrate;

forming a conductive protective layer comprising titanium nitride on the wiring layer;

forming a cap layer comprising an oxynitride on the conductive protective layer;

forming a first mask above the cap layer that exposes selected portions of the cap layer, the first mask comprising patterned photoresist;

etching the cap layer, the conductive protective layer and the wiring layer using the first mask for etching the cap layer, the conductive protective layer and the wiring layer, at the locations where the cap layer is exposed by the first mask, to form wiring lines having exposed side portions separated by first gaps, the wiring lines having a remaining portion of the cap layer above the wiring lines; and

depositing a dielectric material within the first gaps and on the remaining portion of the cap layer above the wiring lines at least during a time when the depositing begins, an initial stage of the depositing forming initial layers of the dielectric material over the substrate, covering the exposed side portions of the wiring lines and over at least portions of the remaining portion of the cap layer so that second gaps are defined by the initial layers formed over the exposed portions of the wiring lines,

the depositing continuing with high density plasma chemical vapor deposition to fill the second gaps, the high density plasma chemical vapor deposition performed at a sputtering rate sufficient to fill the second gaps after the second gaps are defined.

36-39. (Canceled).

40. (Currently amended) A method for forming conducting structures separated by dielectric material over a substrate, comprising:

providing a substrate and a wiring layer above the substrate;

forming a conductive protective layer comprising titanium nitride on the wiring layer;

forming a cap layer comprising silicon oxynitride, a nitride and/or a silicon rich-oxide above the conductive protective layer;

forming a photoresist layer above the cap layer;

patterning the wiring layer to form wiring lines separated by first gaps using a patterned portion of the photoresist layer as a mask for etching the cap layer and the wiring lines, the wiring lines having at least a remaining portion of the cap layer above the wiring lines and having exposed side portions; and

depositing a dielectric material in an initial stage process to form initial layers of the dielectric material over the substrate and covering the exposed side portions of the wiring lines and over at least portions of the remaining portion of the cap layer so that second gaps are defined by the initial layers between pairs of the wiring lines, the depositing continuing after the initial stage at a sufficiently high etch to deposition ratio to fill the second gaps, using a high density plasma chemical vapor deposition (HDPCVD) process,

wherein the remaining portion of the cap layer is partially etched prior to the depositing to include slanted surfaces, the remaining portion of the cap layer protecting top corner sections of the wiring lines during the HDPCVD process.

41. (Previously Presented) The method of claim 40, wherein the HDPCVD process

uses an inductively coupled plasma, helicon or electrostatically shielded radio frequency source.

42. (Previously Presented) The method of claim 40, wherein the remaining portion of the cap layer is formed prior to the depositing to have facets adapted to reduce etching during the HDPCVD process.

43. (Previously Presented) The method of claim 40, wherein the cap layer comprises a material selected from the group consisting of a silicon nitride material and an oxynitride material.

44. (Previously Presented) The method of claim 40, wherein a sputtering rate of the HDPCVD process varies while the second gaps are being filled with the dielectric material.

45. (Canceled).

46. (Previously Presented) The method of claim 21, wherein the conductive protective layer is absorptive at a wavelength used during the formation of the mask layer.

47. (Canceled).

48. (Previously Presented) The method of claim 21, wherein the conductive protective layer limits electromigration in the wiring layer.

49. (Previously Presented) The method of claim 21, wherein the HDPCVD process uses an inductively coupled plasma source.

50. (Previously Presented) The method of claim 35, wherein the conductive protective layer is absorptive at a wavelength used during the formation of the mask layer.

51. (Canceled).

52. (Previously Presented) The method of claim 35, wherein the conductive protective layer limits electromigration in the wiring layer.

53. (Previously Presented) The method of claim 35, wherein the HDPCVD process uses an inductively coupled plasma source.

54. (Previously Presented) The method of claim 40, wherein the conductive protective layer is absorptive at a wavelength used during the formation of the mask layer.

55. (Canceled).

56. (Previously Presented) The method of claim 40, wherein the conductive protective layer limits electromigration in the wiring layer.

57. (Canceled).

58. (Previously Presented) The method of claim 21, wherein the dielectric material is not formed on the corners of the remaining portions of the cap layer at the initial stage of the depositing.